



Atty. Dkt. No. 030523-0141

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Henryk LUBON, et al.

Title: METHODS FOR THE DEGRADATION AND DETOXIFICATION OF
ORGANIC MATERIAL USING URINE PRODUCED BY TRANSGENIC
ANIMALS AND RELATED TRANSGENIC ANIMALS AND PROTEINS

Appl. No.: 08/982,284

Filing Date: 12/01/1997

Examiner: Michael C. Wilson

Art Unit: 1632

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

RECEIVED
NOV 06 2003
TECH CENTER 1600/2900

Mail Stop PATENT APPLICATION
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of documents A41 – A50 are being submitted to comply with the provisions of 37 CFR §1.97 and §1.98. Copies of documents A1-A25 were provided with the supplemental response filed on July 10, 2003, A26-A38 were provided with the response filed March 19, 2001 and document A40 was provided with the response filed February 29, 2000.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.



Atty. Dkt. No. 030523-0141

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date October 30, 2003

FOLEY & LARDNER

Customer Number: 22428

Telephone: (202) 672-5404

Facsimile: (202) 672-5399

By Jayne A. Hulcatt

Jayne A. Hulcatt

Attorney for Applicant

Registration No. 34,485

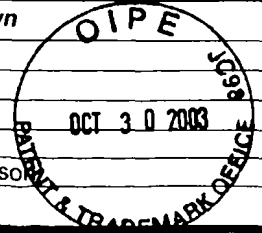
RECEIVED

NOV 06 2003

TECH CENTER 1600/2900

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				C mplete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	08/982,284
				Filing Dat	12/01/1997
Date Submitted: October 30, 2003				First Nam d Inventor	Henryk Lubon
				Group Art Unit	1632
(use as many sheets as necessary)				Examiner Name	Michael C. Wilson
				Attorney Docket Number	030523-0141
Sheet	1	of	6		



NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ⁶
	A1	Fukamizu et al. "Tissue-Specific <i>Trans</i> -Activation of Renin Gene By Targeted Expression of Adenovirus Eia in Transgenic Mice," <i>Biochemical and Biophysical Research Communications</i> , 199(1):183-190 (02/28/94) ©Academic Press, Inc.			
	A2	Fukuoka, et al., "Assignment of the Tamm-Horsfall protein/uromodulin gene (<i>Umod</i>) to mouse chromosome bands 7F1-F2 and rat chromosome bands 1q36→q37 by in situ hybridization," <i>Cytogenet Cell Geneti</i> , 79:241-242 (1997) ©S. Karger AG Basel.			
	A3	Haider et al., "Electron Microscopic Localization of LacZ Expression in the Proximal Convoluted Tubular Cells of the Kidney in Transgenic Mice Carrying Chimeric Erythropoietin/lacZ Gene Constructs," <i>Journal of Structural Biology</i> 118:220-225 (1997) ©Academic Press.			
	A4	Inase et al., "Isolation of Human Aquaporin 3 Gene," <i>The Journal of Biological Chemistry</i> 270(30):17913-17916 (July 28, 1995) ©The Amercian Society for Biochemistry and Molecular Biology, Inc.			
	A5	Jiang et al., "Expression of osteopontin mRNA in normal and stone-forming rat kidney," <i>Urol Res</i> 26:389-294 (1998) ©Springer-Verlag.			
	A6	Kim et al., "Kidney-specific activity of the bovine uromodulin promoter," <i>Transgenic Research</i> 12:191-201 (2003) © Kluwer Academic Publishers.			
	A7	Lin et al, "Precursor Sequence Processing, and Urothelium-specific Expression of a Major 15-kDa Protein Subunit of Asymmetric Unit Membrane," <i>The Journal of Biological Chemistry</i> 269(3):1775-1784 (January 21, 1994) © The American Society for Biochemistry and Molecular Biology, Inc.			
	A8	Lin et al., "A tissue-specific promoter that can drive a foreign gene to express in the suprabasal urothelial cells of transgenic mice," <i>Proc. Natl. Acad. Sci. USA</i> 92:679-683 (January 1995)			
	A9	Mullins et al., "Studies on the Regulation of Renin Genes Using Transgenic Mice," <i>Clin. And Exper. Hyper-Theroy and Practice</i> A10(6):1157-1167 (1988) ©Marcel Dekker, Inc.			

RECEIVED

NOV 06 2003

002.1099931.1

Examiner Signature	Date Considered	TECH CENTER 1600/2900
--------------------	-----------------	-----------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	08/982,284
				Filing Date	12/01/1997
				First Named Inventor	Henryk Lubon
				Group Art Unit	1632
				Examiner Name	Michael C. Wilson
Date Submitted: October 30, 2003				OCT 30 2003	
(use as many sheets as necessary)				Attorney Docket Number	
Sheet	2	of	6	030523-0141	

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	A10	Pennica et al., "Identification of Human Uromodulin as the Tamm-Horsfall Urinary Glycoprotein," <i>Science</i> 236:83-88 (April 3, 1987)		
	A11	Pook et al., "Localization of the Tamm-Horsfall glycoprotein (uromodulin) gene to chromosome 16p12.3-16p13.11," <i>J. Hum. Genet</i> 57:285-290 (1993).		
	A12	Rai et al., "Cloning of rat and mouse aquaporin-2 gene promoters and identification of a negative <i>cis</i> -regulatory element," <i>Am. J. Physiol.</i> 273(2 pt 2):F264-73 (August 27, 1997) ©American Physiological Society.		
	A13	Semenza et al., "Cell-type-specific and hypoxia-inducible expression of the human erythropoietin gene in transgenic mice," <i>Proc. Natl. Acad. Sci. USA</i> , 88:8725-8729 (October 1991)		
	A14	Semenza, Gregg L., "Erythropoietin Gene Expression in Transgenic Mice and Human Hepatoma Cells," <i>Annals New York Academy of Sciences</i> , 718:41-49 (April 15, 1994)		
	A15	Shiraga et al., "Inhibition of calcium oxalate crystal growth <i>in vitro</i> by uropontin: Another member of the aspartic acid-rich protein superfamily," <i>Proc. Natl. Acad. Sci. USA</i> 89:426-430 (January 1992)		
	A16	Sigmund et al., "Tissue and Cell Specific Expression of a Renin Promoter-Reporter Gene Construct in Transgenic Mice," <i>Biochemical and Biophysical Research Communications</i> , 170(1):344-350 (July 16, 1990) ©Academic Press, Inc.		
	A17	Simonet et al., "In the Absence of a Downstream Element, the Apolipoprotein E Gene Is Expressed at High Levels in Kidneys of Transgenic Mice," <i>The Journal of Biological Chemistry</i> 265(19):10809-10812 (July 5, 1990) © The American Society for Biochemistry and Molecular Biology, Inc.		
	A18	Stricklett et al., "Targeting Collecting Tubules Using the Aquaporin-2 Promoter," <i>Exp. Nephrol</i> 7:67-74 (1999) ©S. Karger AG.		

002.1099931.1

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

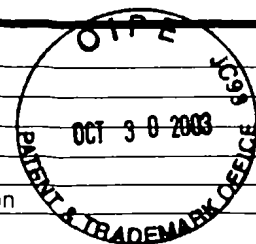
¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: October 30, 2003 (use as many sheets as necessary)				Application Number	08/982,284
				Filing Date	12/01/1997
				First Named Inventor	Henryk Lubon
				Group Art Unit	1632
				Examiner Name	Michael C. Wilson
Sheet 3 of 6				Attorney Docket Number	030523-0141



NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	A19	Uchida et al., "Isolation of Human Aquaporin-CD Gene," <i>The Journal of Biological Chemistry</i> 269(38):23451-23455 (September 23, 1994) ©The American Society for Biochemistry and Molecular Biology, Inc.		
	A20	Umenishi et al., "Isolation of the Human Aquaporin-1 Promoter and Functional Characterization in Human Erythroleukemia Cell Lines," <i>Genomics</i> 47:341-349 (1998) ©Academic Press.		
	A21	Yu et al., "Bovine and Rodent Tamm-Horsfall Protein (THP) Genes: Cloning, Structural Analysis, and Promoter Identification," <i>Gene Expr.</i> 4(1-2):63-75 (1994) ©Cognizant Comm. Corp.		
	A22	Zbikowska et al., "The use of uromodulin promoter to target production of recombinant proteins into urine of transgenic animals," <i>Transgenic Research</i> 11:425-435 (2002) ©Kluwer Academic Publishers.		
	A23	Zbikowska et al., "Uromodulin promoter directs high-level expression of biologically active human α_1 -antitrypsin into mouse urine," <i>Biochem J.</i> 365:7-11 (2002) ©Biochemical Society		
	A24	Zhu et al., "Isolation of mouse THP gene promoter and demonstration of its kidney-specific activity in transgenic mice," <i>Am. J. Physiol Renal Physiol</i> 282:F608-F617 (2002)		
	A25	Zhu et al., "Renal tubule-specific expression and urinary secretion of human growth hormone: a kidney-based transgenic bioreactor," <i>Transgenic Research</i> 12:155-162 (2003) © Kluwer Academic Publishers.		
	A26	Archibald, et al., <i>Proc. Natl. Acad Sci</i> 87:5178-5182 (1990)		
	A27	Badgett et al., <i>Urol Int</i> 61:72-75 (1998)		

RECEIVED

NOV 06 2003

TECH CENTER 1600/2900

002.1099931.1

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

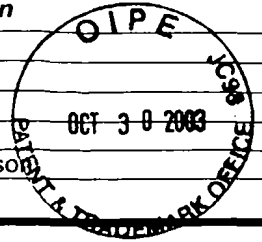
¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Comple t if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Applicati n Numb r	08/982,284
				Filing Date	12/01/1997
Date Submitted: October 30, 2003				First Named Inventor	Henryk Lubon
				Group Art Unit	1632
(use as many sheets as necessary)				Examiner Name	Michael C. Wilson
				Attorney Docket Number	030523-0141
Sheet	4	of	6		



NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A28	Ebert et al., <i>Bio/Technology</i> 9:835-838 (1991)	
	A29	Ernst et al., <i>"Dokl Akad Nauk</i> 345:555-558 (1995)	
	A30	Gordon et al., <i>Bio/Technology</i> 5:1183-1187 (1987)	
	A31	Howie et al., <i>"Cell Tissue Res</i> 274(1):15-19 (1993)	
	A32	Kleinjan et al, <i>Transgenic Res</i> 7:85-94 (1998)	
	A33	Massoud et al., <i>J. Biotechnol</i> 18:193-204 (1991)	
	A34	Meade et al., <i>Bio/Technology</i> 8:443-446 (1990)	
	A35	Pittius et al. <i>Proc. Natl. Acad Sci</i> 85:5874-5878 (1988)	

RECEIVED
NOV 06 2003
TECH CENTER 1600/2900

002.1099931.1

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

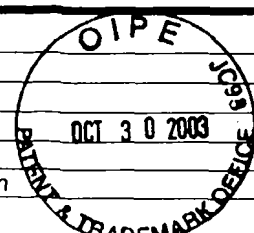
¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	08/982,284
		Filing Date	12/01/1997
Date Submitted: October 30, 2003 (use as many sheets as necessary)		First Named Inventor	Henryk Lubon
		Group Art Unit	1632
Sheet 5 of 6		Examiner Name	Michael C. Wilson
		Attorney Docket Number	030523-0141



NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A36	Reitman et al., <i>Nature</i> 348(6303):749-752 (December 20-27 1990)	
	A37	Taboit-Dameron et al., <i>Transgenic Res</i> 8:223-235 (1999)	
	A38	Yu et al., <i>Gene Expr.</i> 4:63-75 (1994)	
	A40	Lubon et al., <i>Transfusion Medicine Reviews</i> X(2): 131-143 (1996)	
	A41	Germain et al., 2001	
	A42	Haidar et al., "Differential expression of <i>lacZ</i> in the liver and kidney of transgenic mice carrying chimeric <i>lacZ</i> -erythropoietin gene constructs with or without its 1.2 kb 3'-flanking sequence," <i>Nucleic Acids Research</i> 24(18):3621-3628 (1996) © Oxford University Press.	
	A43	Hijiya et al., "Cloning and characterization of the human osteopontin gene and its promoter," <i>BioChem J.</i> 303:255-262 (1994).	
	A44	Hozawa et al., American Physiological Society, C1695-C1702 (1996)	

RECEIVED
NOV 06 2003
TECH CENTER 1600/2900

002.1099931.1

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

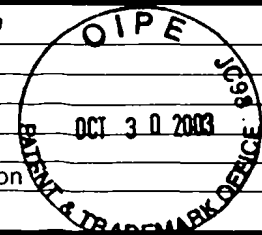
¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	08/982,284
		Filing Date	12/01/1997
Date Submitted: October 30, 2003 (use as many sheets as necessary)		First Named Inventor	Henryk Lubon
		Group Art Unit	1632
Sheet 6 of 6		Examiner Name	Michael C. Wilson
		Attorney Docket Number	030523-0141



NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A45	Kohri et al., "Structure and Expression of the mRNA Encoding Urinary Stone Protein (Osteopontin)," <i>The Journal of Biological Chemistry</i> 268(20):15180-15184 (July 15, 1993). ©The American Society for Biochemistry and Molecular Biology, Inc.	
	A46	Nelson et al., "Expression of an AQP2 Cre recombinase transgene in kidney and male reproductive system of transgenic mice," <i>Am. J. Physiol</i> 275(1 Pt 1):C216-226 (July 1998) ©The American Physiological Society.	
	A47	Sakuma et al., "Difference of osteopontin gene regulation between bone and kidney," <i>J. Orthop Sci.</i> 8:361-366 (2003) ©The Japanese Orthopedic Association.	
	A48	Smith et al., "Accumulation of Human Apolipoprotein E in the Plasma of Transgenic Mice," <i>The Journal of Biological Chemistry</i> 265(25):14709-14712 (September 5, 1990) ©The American Society for Biochemistry and Molecular Biology, Inc.	
	A49	Wen et al., "Urinary Excretion of Aquaporin-2 in Rat Is Mediated by a Vasopressin-Dependent Apical Pathway," <i>J. Am Soc Nephrol</i> 10:1416-1429 (1999) ©American Society of Nephrology.	
	A50	Zharkikh et al, "Renal principal cell-specific expression of green fluorescent protein in transgenic mice," <i>Am J. Physiol Renal Physiol</i> 283:F1351-F1364 (2002)	

002.1099931.1

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450,